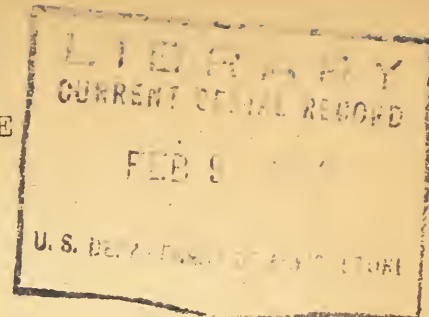


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UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH ADMINISTRATION
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE

INSECT PEST SURVEY



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STATUS OF THE EUROPEAN CORN BORER IN 1948

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Distribution

In 1948 the distribution of the European corn borer (*Pyrausta nubilalis* (Hbn.)) was extended 116 counties. One State, Louisiana, was added to the list. A total of 1167 counties and one parish in 29 States are now known to be infested by the corn borer. The known distribution of the corn borer in the United States, and the counties where infestations were reported for the first time in 1948 are shown on Map 1.

A total of 95 of the new county infestations were west of the Mississippi River, and 10 were east of the river in Kentucky and Tennessee. Nine new county infestations were reported from the Eastern States of Maryland, West Virginia, Virginia, and North Carolina.

Missouri, South Dakota, and Nebraska reported 35, 34, and 20 new county infestations, respectively. Minnesota and North Dakota reported 2 each, and Kansas reported 1.

^{1/}The field data presented in this report was obtained by State agencies and the Bureau of Entomology and Plant Quarantine. In many cases State and Federal workers cooperated in the field in making observations. The data were assembled and tabulated at the European Corn Borer Research Laboratory, Toledo, Ohio, Wm. G. Bradley in charge. State Agencies that contributed data and assistance were as follows: State Agricultural Experiment Stations of Connecticut, Delaware, Iowa, Kentucky, Massachusetts, Missouri, New York, North Dakota, Ohio, South Dakota, Virginia, and West Virginia; State departments of agriculture of Maine, Maryland, Minnesota, New Hampshire, New Jersey, North Carolina, Pennsylvania, Rhode Island, Tennessee, Virginia, West Virginia, Vermont, and Wisconsin; Illinois, Natural History Survey; Indiana Department of Conservation; Entomological Commission of Kansas; and the Extension Services of Michigan, Missouri, Nebraska, and Pennsylvania.

An infestation was reported in the Parish of St. John the Baptist, in Louisiana. One specimen of the corn borer was taken from corn near the town of Laplace, approximately 450 miles from the nearest infested counties in Tennessee and Missouri.

The following list gives the States and counties from which the pest was reported for the first time in 1948:

Kansas:	Missouri, cont.:	South Dakota, cont.:
Woodson	St. Clair	Clay
	St. Francois	Codington
Kentucky:	Saline	Davison
Christian	Stoddard	Day
Hopkins	Sullivan	Deuel
Trigg	Vernon	Douglas
	Warren	Edmunds
Louisiana:	Washington	Faulk
St. John the Baptist	Worth	Grant
(Parish)		Hamlin
	Nebraska:	Hand
Maryland:	Adams	Hanson
Garrett	Buffalo	Hutchinson
	Clay	Jerauld
Michigan:	Dawson	Kingsbury
Grand Traverse	Fillmore	Lake
	Franklin	Lyman
Minnesota:	Furnas	McCook
Lake of the Woods	Gage	Marshall
Roseau	Harlan	Miner
	Jefferson	Moody
Missouri:	Kearney	Roberts
Atchison	Lincoln	Sanborn
Bates	Madison	Spink
Bollinger	Nuckolls	Turner
Boone	Redwillow	Yankton
Cass	Thayer	
Clay	Thurston	Tennessee:
Clinton	Wayne	Cheatham
Cole	Webster	Clay
Cooper	York	Dickson
Crawford		Houston
Gasconade	North Carolina:	Humphreys
Henry	Martin	Macon
Howard		Stewart
Iron	North Dakota:	
Johnson	La Moure	Virginia:
Lafayette	Stutsman	Bland
Madison		Smyth
Maries	South Dakota:	Tazewell
Mercer	Aurora	Washington
Miller	Beadle	
Osage	Bon Homme	West Virginia:
Pettis	Brookings	Berkeley
Phelps	Brown	Harrison
Platte	Brule	Kanawha
Pulaski	Charles Mix	Nicholas
Ray	Clark	

Abundance

In the fall of 1948 agencies in 26 States cooperated with the Bureau of Entomology and Plant Quarantine in making corn borer-abundance surveys. Examinations were made in 635 counties by State and Federal workers. Most States followed a recommended standard procedure of taking 10 field samples per county.

The standard field sample was the same as that used in previous years. It consisted of the examination of 25 consecutive plants to determine the percentage of plants infested. Two infested plants in each sample were dissected to determine the number of borers per infested plant. The product of the percentage of infestation and the number of borers per plant, expressed as borers per 100 plants, was used to denote a field population. The average of the field populations is given in this report as the mean population for each county or section.

In the Maine and Pennsylvania surveys more than 25 plants were examined and more than 2 plants per field were dissected. The number of field samples per county varied from 2 to 58 in Maine, and 12 to 20 in Pennsylvania.

The standard field sample was used in Delaware, but 20 were taken in each county.

In Iowa 50 standard samples were taken in each of 12 corn-testing districts. The number of field samples per county varied from 4 to 10.

The standard procedure of examining 10 fields was followed in 32 of the southern counties of Minnesota, and 5 standard samples were taken in each of the other 28 counties.

In the Michigan, Missouri, and South Dakota surveys a varying number of standard samples were taken per county.

A summary of all State surveys is given in table 1, and abundance of the borer is shown on map 2. The data which were taken in the various surveys are given in table 2.

Table 1.--Summary by States of European corn borer abundance in corn, fall of 1948, compared with data for 1947

State	1947		1948		Counties surveyed both years		
	Number of counties surveyed	Average number of borers per 100 plants	Number of counties surveyed	Average number of borers per 100 plants	Number of counties	Borers per 100 plants	
						1947	1948
Connecticut	8	22	8	31	8	22	31
Delaware	3	85	3	88	3	62	88
Illinois	37	136	37	137	37	136	137
Indiana	70	67	70	68	70	67	68
Iowa	99	119	99	202	99	119	202
Kentucky	7	144	12	57	7	144	57
Maine	12	79	9	143	8	82	158
Maryland	19	203	23	80	19	203	92
Massachusetts	4	51	4	117	4	51	117
Michigan	6	54	8	53	6	54	48
Minnesota	61	119	60	76	60	120	76
Missouri	18	21	48	15	12	12	30
Nebraska	-	-	24	38	-	-	-
New Hampshire	9	64	8	184	8	60	184
New Jersey	20	59	20	59	20	59	59
New York	20	73	20	50	20	73	50
North Carolina	3	36	3	53	3	36	53
North Dakota	-	-	14	Tr.*	-	-	-
Ohio	30	43	31	89	30	43	88
Pennsylvania	43	70	38	90	36	77	90
Rhode Island	3	90	3	192	3	90	192
South Dakota	-	-	25	55	-	-	-
Vermont	11	44	11	19	11	44	19
Virginia	13	124	13	86	12	133	92
West Virginia	-	-	3	21	-	-	-
Wisconsin	52	48	42	33	42	54	33
Total	548		635		517	91	101

* Trace -- average less than one.

Table 2.--European corn borer abundance in corn, fall of 1948, compared with data for 1947

State and County	Average number of borers per 100 plants		State and County	Average number of borers per 100 plants	
	1947	1948		1947	1948
Connecticut:			Illinois (cont.),		
Fairfield	17	13	Central---		
Hartford	21	52	Peoria	197	346
Litchfield	13	31	Logan	110	49
Middlesex	22	45	McLean	145	273
New Haven	25	23	Macon	35	38
New London	43	19	Woodford	160	249
Tolland	26	35			
Windham	11	27	East---		
Delaware:			Champaign	49	77
Kent	98	82	Iroquois	97	177
New Castle	59	40	Kankakee	163	227
Sussex	97	152	Livingston	157	363
			Vermilion	89	83
Illinois:			West southwest---		
Northwest---			Cass	36	22
Bureau	324	294	Christian	50	38
Jo Daviess	464	109	Madison	21	34
Mercer	422	323	Sangamon	119	25
Ogle	236	165			
Whiteside	166	183	East southeast---		
Winnebago	343	80	Clark	36	19
			Jasper	3	8
Northeast---			Lawrence	13	10
Boone	195	44	Moultrie	47	25
De Kalb	130	163			
Du Page	104	156	Southwest---		
Lake	58	96	St. Clair	27	53
LaSalle	89	267			
Will	123	80	Indiana:		
			Northwest---		
West---			Benton	63	44
Adams	58	42	Jasper	90	183
Brown	36	22	Lake	109	155
Hancock	106	171	La Porte	85	79
Henderson	220	266	Newton	146	180
Knox	249	285	Porter	84	179
McDonough	75	97	Pulaski	140	186
			Sterke	97	186
			White	84	247

Table 2.--Continued

State and County	Average number of borers per 100 plants		State and County	Average number of borers per 100 plants	
	1947	1948		1947	1948
Indiana: (Cont.),			Indiana (Cont.):		
North Central---			Central---(Cont.)-		
Carroll	31	201	Howard	27	38
Cass	39	163	Johnson	60	95
Elkhart	189	86	Madison	10	16
Fulton	97	211	Marion	23	45
Kosciusko	129	34	Rush	23	16
Marshall	143	182	Shelby	80	64
Miami	29	34	Tipton	11	23
St. Joseph	153	208			
Wabash	30	45	East---		
			Blackford	43	72
Northeast---			Delaware	64	81
Adams	18	68	Fayette	25	85
Allen	23	8	Henry	97	67
De Kalb	78	24	Jay	10	77
Huntington	129	147	Randolph	11	94
Lagrange	206	140	Union	45	88
Noble	180	28	Wayne	21	119
Steuben	99	20			
Wells	29	6	Southwest---		
Whitley	94	52	Gibson	18	5
			Knox	38	45
West---			Posey	12	12
Clay	4	12	Sullivan	34	4
Fountain	33	13			
Montgomery	77	106	Southeast---		
Owen	47	3	Dearborn	6	5
Parke	236	39	Franklin	41	74
Putnam	97	34	Jefferson	36	5
Tippecanoe	45	43	Ohio	17	4
Vermillion	216	20	Ripley	5	30
Vigo	65	9	Switzerland	19	9
Warren	63	27			
			Iowa:		
Central---			District 1---		
Bartholomew	93	30	Clay	43	219
Boone	101	25	Dickinson	14	51
Clinton	91	24	Emmet	30	185
Decatur	14	20	Lyon	7	32
Grant	22	24	Osceola	3	186
Hamilton	6	10	O'Brien	33	138
Hancock	65	19	Palo Alto	64	175
Hendricks	69	27	Sioux	20	172

Table 2.--Continued

State and County	Average number of borers per 100 plants		State and County	Average number of borers per 100 plants	
	1947	1948		1947	1948
Iowa: (Cont.)					
District 2---			District 7---		
Cerro Gordo	79	389	Audubon	32	458
Floyd	234	108	Guthrie	77	131
Hancock	75	233	Carroll	49	257
Kossuth	51	492	Crawford	158	486
Mitchell	159	83	Greene	67	223
Winnebago	90	181	Harrison	52	233
Worth	185	195	Monona	135	334
			Shelby	47	172
District 3---			District 8---		
Allamakee	78	39	Boone	74	381
Chickasaw	239	164	Dallas	35	162
Clayton	128	113	Jasper	99	529
Fayette	322	94	Marshall	168	586
Howard	82	38	Polk	20	168
Winneshiek	171	48	Poweshiek	74	478
			Story	77	238
District 4---			Tama	252	302
Buena Vista	51	460	District 9---		
Calhoun	32	381	Benton	344	114
Cherokee	14	200	Cedar	187	392
Ida	62	446	Iowa	197	377
Plymouth	26	341	Johnson	202	260
Pocahontas	28	242	Keokuk	310	151
Sac	57	383	Louisa	207	71
Woodbury	65	253	Muscatine	143	239
District 5---			Scott	243	49
Butler	316	146	Washington	106	337
Franklin	186	172	District 10---		
Grundy	224	304	Adair	12	154
Hamilton	54	211	Adams	11	99
Hardin	366	229	Cass	26	167
Humboldt	53	265	Fremont	7	16
Webster	36	348	Mills	20	64
Wright	109	361	Montgomery	60	117
District 6---			Page	3	64
Black Hawk	264	297	Pottawattamie	58	156
Bremer	469	239	Taylor	5	78
Buchanan	267	143			
Clinton	105	76			
Delaware	330	119			
Dubuque	269	51			
Jackson	423	25			
Jones	450	72			
Linn	433	230			

Table 2.--Continued

State and County	Average number of borers per 100 plants		State and County	Average number of borers per 100 plants	
	1947	1948		1947	1948
Iowa: (Cont.)			Maine:		
District 11---			Androscoggin		
Appanoose	68	68	Cumberland	74	198
Clarke	75	68	Franklin	85	157
Decatur	32	94	Kennebec	68	121
Lucas	34	50	Knox	78	143
Madison	13	36	Lincoln	52	-
Mahaska	190	148	Oxford	116	127
Marion	240	294	Penobscot	-	25
Monroe	49	77	Piscataquis	59	-
Ringgold	17	32	Sagadahoc	70	126
Union	50	30	Somerset	76	-
Warren	108	62	Waldo	70	149
Wayne	10	10	York	94	243
District 12---			Maryland:		
Davis	73	145	Allegany	-	33
Des Moines	141	191	Anne Arundel	-	38
Henry	65	103	Baltimore	251	50
Jefferson	53	134	Calvert	-	21
Lee	26	120	Caroline	121	47
Van Buren	41	123	Carroll	551	251
Wapello	70	157	Cecil	41	30
Kentucky:			Charles	3	7
Bourbon	-	76	Dorchester	102	59
Boyle	-	75	Frederick	639	210
Bullitt	30	17	Garrett	-	9
Fayette	194	40	Harford	222	160
Hardin	42	75	Howard	344	139
Jefferson	192	162	Kent	95	27
Madison	-	52	Montgomery	414	95
Meade	60	28	Prince Georges	14	24
Nelson	-	44	Queen Annes	67	56
Trimble	45	14	St. Marys	19	38
Warren	-	41	Somerset	98	54
Woodford	442	60	Talbot	74	52
			Washington	400	209
			Wicomico	31	109
			Worcester	366	122

Table 2.--Continued

State and County	Average number of borers per 100 plants		State and County	Average number of borers per 100 plants	
	1947	1948		1947	1948
Massachusetts:			East Central District---		
Bristol	49	232	Anoka	80	20
Franklin	15	11	Chisago	32	10
Norfolk	97	137	Hennepin	89	35
Plymouth	42	36	Isanti	44	24
			Kanabec	5	0
Michigan:			Mille Lacs	21	3
Allegan	-	12	Pine	13	9
Lenawee	55	104	Ramsey	38	-
Macomb	144	10	Washington	89	60
Monroe	65	113			
St. Clair	13	12	Southwest District---		
Sanilac	19	5	Cottorwood	63	103
Van Buren	-	130	Jackson	83	81
Wayne	27	36	Lincoln	0	7
			Lyon	2	24
Minnesota:			Murray	8	12
West Central District---			Nobles	39	20
Big Stone	10	18	Pipestone	1	37
Chippewa	10	35	Redwood	82	123
Douglas	1	6	Rock	22	85
Grant	0	1			
Lac qui Parle	13	22	South Central District---		
Pope	0	3	Blue Earth	455	175
Stevens	0	8	Brown	159	122
Swift	4	34	Faribault	160	134
Traverse	0	32	Freeborn	430	219
Yellow Medicine	8	31	Le Sueur	72	161
			Martin	85	143
Central District---			Nicollet	137	210
Benton	8	12	Rice	396	185
Carver	225	140	Steele	618	148
Kandiyohi	16	58	Waseca	437	112
McLeod	65	165	Watonwan	179	190
Meeker	16	80			
Morrison	4	4	Southeast District---		
Renville	86	103	Dakota	267	62
Scott	359	180	Dodge	244	101
Sherburne	53	2	Fillmore	215	44
Sibley	47	223	Goodhue	429	176
Stearns	3	9	Houston	178	24
Todd	6	6	Hower	232	71
Wright	44	210	Olmsted	477	115
			Wabasha	169	63
			Winona	217	40

Table 2.--Continued

State and County	Average number of borers per 100 plants		State and County	Average number of borers per 100 plants	
	1947	1948		1947	1948
Missouri:					
Adair	-	22	St. Francois	-	0
Andrew	8	20	St. Genevieve	-	11
Atchison	-	23	St. Louis	9	120
Bates	-	1	Saline	-	3
Bollinger	-	0	Scotland	129	-
Buchanan	40	-	Stoddard	-	0
Cass	-	8	Sullivan	-	38
Clark	33	31	Vernon	-	0
Clay	-	7	Warren	-	8
Clinton	-	8	Washington	-	0
Cooper	-	18	Worth	-	0
Crawford	-	0			
Daviess	36	-	Nebraska:		
De Kalb	-	18	Northeast---		
Gasconade	-	5	Burt		102
Gentry	23	20	Cedar		68
Grundy	-	28	Dakota		114
Harrison	22	-	Dixon		44
Henry	-	0	Thurston		93
Howard	-	17			
Iron	-	0	East---		
Jackson	0	-	Butler		5
Johnson	-	3	Cass		34
Lafayette	-	8	Colfax		16
Lewis	25	37	Dodge		35
Lincoln	-	3	Douglas		65
Livingston	9	12	Lancaster		30
Madison	-	0	Platte		22
Marion	13	29	Polk		17
Mercer	-	19	Sarpy		41
Monroe	4	0	Saunders		12
Montgomery	6	48	Seward		22
New Madrid	1	-	Washington		63
Nodaway	8	26			
Perry	2	5	Southeast---		
Pettis	-	1	Gage		8
Phelps	-	0	Johnson		8
Pike	-	4	Nebraska		29
Platte	-	6	Otoe		30
Ralls	8	11	Pawnee		9
Ray	-	19	Richardson		36
St. Charles	-	53	Saline		2
St. Clair	-	0			

Table 2.--Continued

State and County	Average number of borers per 100 plants		State and County	Average number of borers per 100 plants	
	1947	1948		1947	1948
New Hampshire:			New York: (Cont.)		
Belknap	23	202	Oneida	15	32
Carroll	84	348	Onondaga	91	24
Cheshire	65	55	Ontario	10	8
Grafton	99	-	Orange	78	68
Hillsboro	71	212	Orleans	58	9
Merrimack	28	154	Rensselaer	21	41
Rockingham	58	221	Saratoga	42	67
Stafford	77	240	Schenectady	58	48
Sullivan	73	44	Suffolk	146	69
New Jersey:			Ulster	251	36
Atlantic	53	62	Wayne	12	5
Bergen	115	76	North Carolina:		
Burlington	59	57	Camden	35	38
Camden	83	41	Currituck	57	108
Cape May	47	135	Pasquotank	16	13
Cumberland	30	14	North Dakota:		
Essex-Union	55	28	Barnes	-	0
Gloucester	72	91	Cass	-	0
Hunterdon	17	31	Dickey	-	0
Mercer	36	90	Eddy	-	0
Middlesex	159	25	Foster	-	0
Monmouth	35	137	Grand Forks	-	0
Morris	28	41	Griggs	-	0
Ocean	65	151	La Moure	-	Trace*
Passaic	147	40	Nelson	-	0
Salem	51	4	Ransom	-	0
Somerset	34	37	Richland	-	Trace*
Sussex	24	23	Sargent	-	0
Warren	19	29	Steele	-	0
New York:			Traill	-	0
Albany	24	121	Ohio:		
Columbia	51	100	Northwest---		
Dutchess	28	30	Allen	21	74
Erie	86	19	Defiance	36	50
Greene	78	59	Fulton	66	124
Livingston	37	27	Hancock	97	150
Monroe	57	62	Henry	67	94
Nassau	247	137	Lucas	115	217
Niagara	70	33	Ottawa	17	77

Table 2.--Continued

State and County	Average number of borers per 100 plants		State and County	Average number of borers per 100 plants	
	1947	1948		1947	1948
Ohio: (Cont.)			Pennsylvania: (Cont.)		
Northwest---(Cont.)			Butler		
Paulding	24	71	Carbon	7	5
Putnam	28	63	Centre	41	49
Van Wert	42	43	Chester	109	319
Williams	21	45	Clinton	-	108
Wood	54	269	Columbia	10	-
Northeast---			Crawford	15	15
Wayne	-	114	Cumberland	241	122
West Central---			Dauphin	112	122
Auglaize	27	54	Delaware	150	139
Champaign	66	71	Erie	41	21
Clark	26	188	Franklin	151	196
Darke	24	124	Fulton	12	22
Hardin	68	12	Huntingdon	13	28
Logan	28	32	Indiana	43	37
Mercer	14	31	Juniata	70	81
Miami	35	85	Lancaster	118	143
Shelby	15	34	Lawrence	22	13
Central---			Lebanon	208	209
Fayette	22	61	Lehigh	70	56
Franklin	40	123	Luzerne	20	13
Madison	26	67	Lycoming	34	55
Pickaway	64	34	Mercer	20	13
Southwest---			Mifflin	62	226
Butler	53	45	Monroe	11	-
Greene	33	84	Montgomery	123	255
Hamilton	88	49	Montour	11	-
Montgomery	46	177	Northampton	21	34
Preble	31	83	Northumberland	26	-
Pennsylvania:			Perry	104	32
Adams	231	74	Philadelphia	123	299
Allegheny	48	43	Schuylkill	59	-
Armstrong	3	4	Snyder	30	30
Bedford	9	10	Somerset	3	43
Berks	96	103	Union	76	60
Blair	18	26	Westmoreland	38	99
Bucks	176	254	York	209	73
			Rhode Island:		
			Newport	86	266
			Providence	118	83
			Washington	67	226

Table 2.--Continued

State and County	Average number of borers per 100 plants		State and County	Average number of borers per 100 plants	
	1947	1948		1947	1948
South Dakota:			Virginia:		
Beadle		13	Accomack	166	88
Bon Homme		34	Clarke	236	115
Brookings		3	Culpeper	22	61
Brule		3	Fairfax	69	38
Charles Mix		19	Fauquier	231	82
Clay		153	Frederick	90	86
Davison		36	Gloucester	-	16
Deuel		2	Loudoun	266	137
Douglas		4	Mansemond	2	22
Grant		26	Norfolk	8	52
Hamlin		5	Northampton	180	374
Hanson		20	Prince William	80	17
Hutchinson		32	Princess Anne	235	27
Kingsbury		12	Westmoreland	22	-
Lake		66			
Lincoln		365	West Virginia:		
Lyman		0	Mason		31
McCook		37	Nicholas		5
Miner		8	Ohio		26
Minnehaha		114			
Moody		58	Wisconsin:		
Sanborn		20	Northwest---		
Turner		99	Chippewa	9	-
Union		177			
Yankton		78	North---		
			Clark	4	6
			Marathon	11	14
Vermont:					
Addison	4	6	Northeast---		
Bennington	54	50	Marinette	52	32
Caledonia	19	15	Oconto	24	35
Chittenden	41	10	Shawano	23	17
Franklin	8	7			
Grand Isle	11	32	West---		
Orange	86	10	Buffalo-Popin	68	-
Rutland	102	30	Dunn	26	-
Washington	26	10	Jackson	11	-
Windham	45	23	La Crosse	16	-
Windsor	86	14	Monroe	7	-
			Pierce	31	-
			St. Croix	4	-
			Trempealeau	14	-

Table 2.--Continued

State and County	Average number of borers per 100 plants		State and County	Average number of borers per 100 plants	
	1947	1948		1947	1948
Wisconsin: (Cont.)			Wisconsin: (Cont.)		
Central---			Southeast---		
Adams	82	6	Kenosha	37	78
Green Lake	85	39	Milwaukee	30	73
Juneau	3	23	Ozaukee	46	32
Marquette	33	8	Racine	28	40
Portage	14	8	Walworth	42	36
Waupaca	27	26	Washington	73	7
Waushara	33	14	Waukesha	7	54
Wood	20	14			
East---					
Brown	50	24			
Calumet	35	56			
Door	75	33			
Fond du Lac	153	23			
Kewaunee	48	41			
Manitowoc	61	22			
Outagamie	176	21			
Sheboygan	63	33			
Winnebago	185	52			
Southwest---					
Crawford	127	47			
Grant	102	45			
Iowa	81	11			
Lafayette	75	77			
Richland	26	42			
Sauk	34	37			
Vernon	33	22			
South---					
Columbia	21	28			
Dane	46	38			
Dodge	94	36			
Green	41	69			
Jefferson	16	29			
Rock	37	36			

*Less than one.

Formal corn borer surveys were made for the first time in Nebraska, North Dakota, South Dakota, and West Virginia. In North Dakota 14 counties were sampled and borers were found in only 2; the mean population per county was less than one borer per 100 plants in both instances. Three counties surveyed in West Virginia averaged only 21 borers per 100 plants, and 24 counties in Nebraska averaged 38. In the latter State the mean population for Burt and Dakota Counties was 102 and 114 borers per 100 plants. The average of the mean populations for counties surveyed in South Dakota was 55 borers per 100 plants. Clay, Lincoln, Minnehaha, and Union Counties of southeastern South Dakota had mean populations of 153, 365, 114, and 177 borers.

The 1948 surveys in 13 eastern States indicate that the borer was more abundant there than in 1947. Increases occurred in Maine, New Hampshire, Massachusetts, Connecticut, Rhode Island, Pennsylvania, Delaware, and North Carolina. There was no apparent change in the abundance of the borer in New Jersey.

The average population was lower in Vermont, New York, Maryland, and Virginia in 1948 than in 1947.

The average of the populations in Maine, New Hampshire, Massachusetts, and Rhode Island exceeded 100 borers per 100 plants. Populations in none of the other eastern States exceeded this figure.

In the north central region there was little change in the abundance of the corn borer in 1948 compared with 1947. The populations remained about the same in Indiana and Illinois. Decreases in Minnesota and Wisconsin were more than offset by increases in population in Iowa, Missouri, and Ohio. The populations in South Dakota and Nebraska, referred to before, indicate the borer may have increased there also in the past year.

The abundance of borers in Ohio in 1948 was slightly more than double that of 1947. There were 9 counties with mean populations greater than 100, and Lucas and Wood Counties in northwestern Ohio exceeded 200 borers per 100 plants.

There was a definite decrease in abundance of the borers in Kentucky.

In Indiana increases in population in the northern and east-central districts offset decreases in other parts of the State so that the average population remained about the same as in 1947. The average populations in districts 1 and 2 in northwestern Indiana were 160 and 129 borers per 100 plants. The State average was 68.

The situation in Illinois was similar to that in Indiana. The 1948 populations averaged about the same as in 1947. An important decrease in the population of borers took place in northwest Illinois where very high populations were observed in 1947. The survey indicated that increases occurred mostly in the west, central, east, northeast, and southwest districts. The mean populations averaged 137 borers per 100 plants. The northwest district, which had the greatest drop in population, remained the most heavily infested part of the State. The greatest increase in population occurred in the central and east districts. About half the county means exceeded 100 borers per 100 plants, including 10 that exceeded 200 and 3 that exceeded 300 borers per 100 plants.

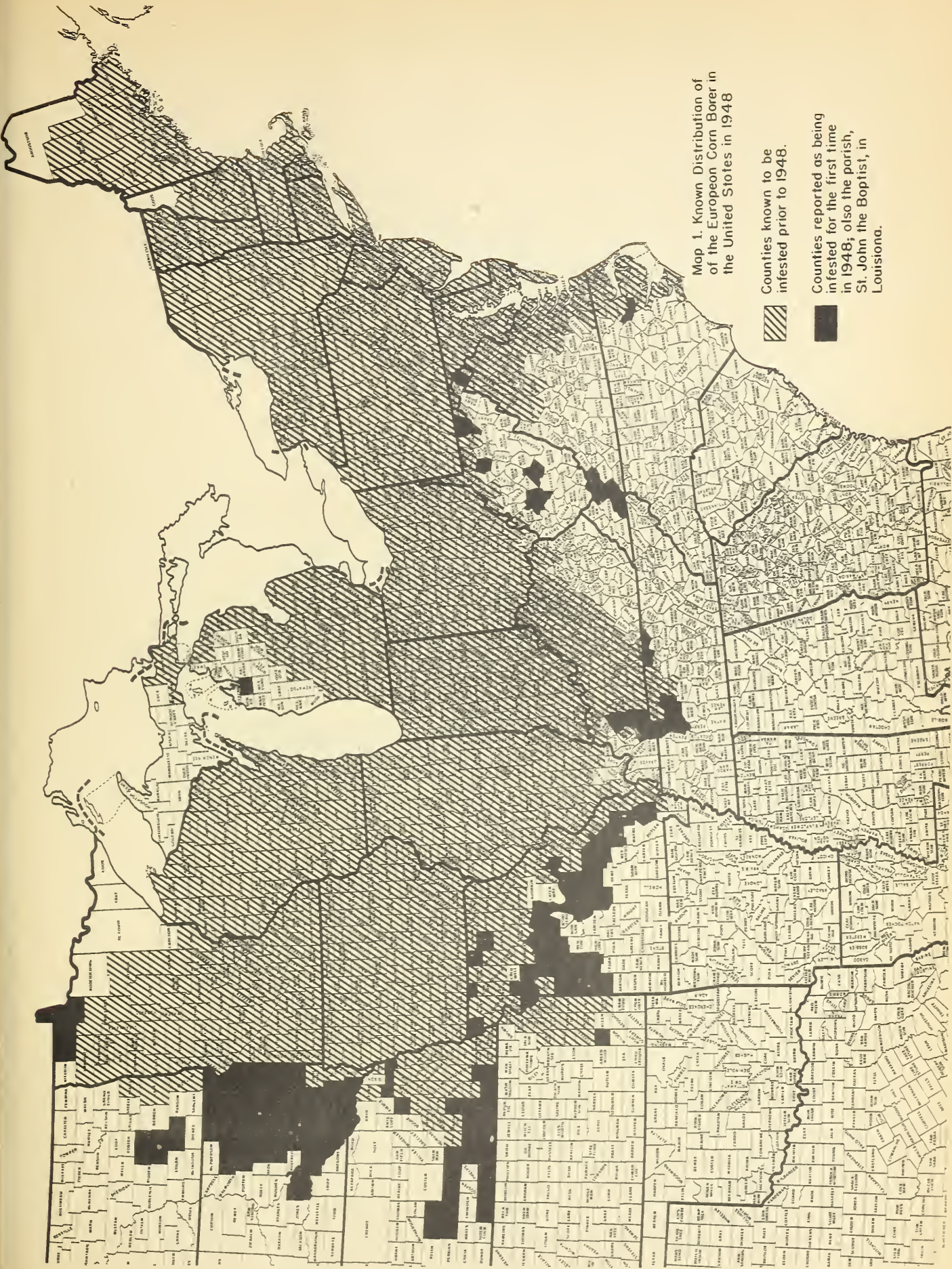
In Iowa the corn borer populations increased in all but 2 of the 12 districts. The decreases occurred in districts 3 and 6 in northeast Iowa. The highest populations were observed in districts 4, in northwest Iowa, and 6, in central Iowa. Both of the latter districts averaged over 300 borers per 100 plants. Only two districts, 3 and 11 in northeast and south central Iowa, had mean populations of less than 100 borers per 100 plants. 4

The borer was less abundant in 1948 in both Wisconsin and Minnesota than in 1947. In Wisconsin no county mean exceeded 100 borers per 100 plants. The State average in 1948 was 33, or 21 less than in 1947, in 42 comparable counties.



In Minnesota the average number of borers per 100 plants decreased from 120 to 76. However, this decrease occurred mainly in the southeastern counties. Increases were indicated in 3 of 6 districts surveyed. The south-central district was the most heavily infested in the State in both 1947 and 1948.

Surveys in Missouri in both 1947 and 1948 indicate the borer may be gradually increasing in the northeast counties of the State.

In general the borer was more abundant in the United States in 1948 than in 1947. The abundance of the borer decreased in sections heavily infested in 1947, but the decrease was more than offset by gains in numbers in other parts of the infested area.



Map 1. Known Distribution of
of the European Corn Borer in
the United States in 1948

 Counties known to be
infested prior to 1948.
 Counties reported as being
infested for the first time
in 1948; also the parish,
St. John the Baptist, in
Louisiana.



